

BUREAU OF ENVIRONMENT CONFERENCE REPORT

SUBJECT: NHDOT Monthly Natural Resource Agency Coordination Meeting

DATE OF CONFERENCE: January 18th, 2017

LOCATION OF CONFERENCE: John O. Morton Building

ATTENDED BY:

NHDOT

Matt Urban
Sarah Large
Ron Crickard
Mark Hemmerlein
David Kammer
Marc Laurin
Kevin Belanger
Rebecca Martin
Jon Hebert
Kirk Mudgett
Victoria Chase
Keith Cota

Trent Zanes
Chris Carucci
Bob Landry

EPA

Mark Kern

NHDES

Gino Infascelli
Lori Sommer

**NH Natural Heritage
Bureau**

Amy Lamb

**Consultants/Public
Participants**

Christin Perron
Mike Tardiff

UNH

David Burdick
Gregg Moore

(When viewing these minutes online, click on an attendee to send an e-mail)

PRESENTATIONS/ PROJECTS REVIEWED THIS MONTH:

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(When viewing these minutes online, click on a project to zoom to the minutes for that project)

NOTES ON CONFERENCE:

Finalization of December 21st Meeting Minutes

Gino Infascelli asked that the minutes not be finalized as he wanted to provide a few comments.

Surry, 41213 Non-Federal

Kevin Belanger reviewed the project and Impacts.

Project Description.

Project is to rehabilitate a 9' x 9' box culvert built in 1939, on Route 12A in Surry.
The existing concrete on the base of the box walls and wing walls is in poor condition.
We propose to build an 8" knee wall (toe wall), and to repair the existing brush curb.

Wetland Impacts.

1186 sq ft of temporary impacts.
101 sq ft of permanent impacts.

Other Impacts.

Daytime alternating one way traffic will be required at times.
Northern Long eared bat was identified as possibly in this area, no tree clearing or cutting is needed.
NHB had no findings.

Other alternatives.

Due to cost other alternatives were not considered. Cost estimate for a complete replacement of the structure upgrading to one compliant with Tier 3 crossing rules is approximately \$600,000.

Mike Hicks indicated he would check to see if there were any Army Corp projects planned in the area. Gino Infascelli indicated that it appeared the outlet side of the structure was slightly perched. Kevin explained that the inlet was a cobble gravel bottom and the outlet appeared to be a solid natural stone bottom that could have at one time been cobble but washed away. Gino noted that the stream was listed as a cold water fisheries area level 2, and asked if the Department could provide a backwater area to reduce or eliminate the perch. Matt Urban asked Kevin about the project schedule; Kevin replied he was hoping mid-summer. Matt indicated that when the department proposes weirs we often collect profile elevations of the stream to help in showing where the weir would be possibly placed as well as the elevations for the construction of the weir/ notch to the elevation of the perch. Kevin indicated he could gather that information starting 30 to 40' below the outlet. Gino also suggested going 5 to 10 feet upstream of the box. Matt clarified that though the impact of any weir needs to be shown DES considers them self-mitigating, and Gino agreed. Matt and Gino both agreed that the toe walls are protection for the existing structure and mitigation is not required.

This project has not been previously discussed at a Monthly Natural Resource Agency Coordination Meeting.

Ossipee, 10431 (X-MGS-NHS-X-T-0271(032))

Rebecca Martin explained that there have been some significant changes to the project and the intent of the meeting is to share those changes and some new stormwater treatment areas proposed. Jon Hebert provided an overview of the project. At the previous meeting, 3 segments with different proposed treatments were presented, now there are only two segments. The northern section previously proposed (north of Polly's Crossing Road) to cold plane 3 inches of existing pavement and put back 3 inches of pavement and related drainage improvements has been removed from the project.

At the southern portion of the project beginning at the intersection of Route 16 and Route 28 the project proposes signal upgrades, restriping and a pavement overlay with minor drainage work. The treatment will extend from the intersection with Route 28 on Route 16 to the intersection with Isaac Buswell Road. The slip ramp to merge onto Route 28 will be removed and a yield right turn lane will be constructed.

From around the intersection with Isaac Buswell Road and extending north to just north of Polly's Crossing Road the treatment will be full box reconstruction with widening and drainage work. Currently the road is between 24 and 26 feet wide in this section with no shoulders and a speed limit of 40 miles per hour. The traffic volume is around 15,000 vehicles per day, with some instances of up to 17,000 vehicles per day. The treatment will require around 3.5 feet of excavation and the existing 1929 concrete slab will be removed. A new ditch line will be installed on the West side of the roadway and the lanes will be 11 feet wide with 5 foot shoulders. The profile and alignment will remain as they exist currently. The design proposes drainage improvements. The water travels through cross culverts through this area from west to east. Also, the two way left turn lane going north from the intersection with Route 28 will be lengthened by around 300 feet. Impervious area will be increase by around 1/3rd of an acre and stormwater treatment areas are also proposed.

Some tree clearing will be necessary, estimated at around 2.3 acres. J. Hebert commented that 0.8 acres of clearing is for the road work and the rest is estimated for the treatment swales. The advertising date for the project is June 2019.

Kirk Mudgett explained that initially a longer segment of resurfacing was proposed north of the project area with a storm water treatment area north of the resurfacing area. K. Mudgett explained that there were a few stormwater treatment options evaluated, that were found to not be practicable. He explained that there is not water collection in the area, which makes treatment challenging. The current design for stormwater treatment will treat just under 0.75 acres between four areas. At the intersection with Route 28 in the northwest quadrant, a small amount of treatment is proposed. At the Copp parcel curb and curb panel is proposed to match into the slope, offering an opportunity for treatment at the end of the added curbing. A similar situation is being pursued at the Stone House. Also, north of the intersection with Polly's Crossing road, the District has requested that the project address an area of curb with openings (swales), where winter maintenance is difficult. District would like basins to collect the water. This provides an opportunity for treatment. There will be 5 possible parcels impacted by the 4 treatment areas. K. Mudgett explained he hopes to refine/reduce these areas in Final Design of the project. BOE will need to visit the treatment areas to extend the wetland delineations. Gino Infascelli commented that he found a notice about the project from 2002.

The project roadway is along a ridge, therefore, the drainage work is minor. The largest waterway through the project area to be addressed passes through a 30" pipe near the intersection with Isaac Buswell Road. This is a Tier 1 crossing with a drainage area of 77 acres. This pipe will be replaced by the project.

Mike Hicks inquired about the Northern Long Eared Bat (NLEB) review for the project and if it is FHWA funded. R. Martin explained that there is FHWA funding and that the project will be reviewed in accordance with the FHWA, FRA, FTA, USFWS, Indiana Bat and Northern Long Eared Bat Range-wide Programmatic Consultation as “May Affect, Likely to Adversely Affect” NLEB without time of year restriction on tree clearing.

M. Hicks inquired about the amount of wetland impacts anticipated for the project. J. Hebert commented that the wetland impacts are anticipated to be relatively minor. The largest impact he is currently aware of is around 500 square feet of impact across Route 16 from the Lobster Quest. More delineation of the stormwater treatment areas will be needed. The project will not approach 3 acres of wetland impacts. Mark Kern commented that there could be difficulties if there are wetlands in proposed treatment areas, as the general policy is not to treat in wetland areas. G. Infascelli noted that NH DES has a written policy not to treat in wetlands, but there are some case by case exceptions.

R. Martin commented that the project limits are now well away from the Natural Community that Amy Lamb had previously commented on. She has received guidance from Kim Tuttle from NH Fish and Game for the Black Racer and Wood Turtle. R. Martin contacted Susi von Oettingen of USFWS to inquire about potential habitat for Small Whorled Pogonia. The Small Whorled Pogonia was listed in the IPaC list, but not the NHB species list. A Lamb has previously explained that this is due to different size buffers of species records used by the different agencies. She inquired if appropriate habitat is in the stormwater treatment areas. R. Martin was not sure which forest types are present, but will look into that. When the stormwater treatment areas are delineated, if suggested by USFWS or NHB, the area could be reviewed.

The project is scheduled for a Public Hearing in February of 2017. The advertising date is in June 2019 and construction is expected to begin in the fall of 2019 or spring of 2020.

This project has been previously discussed at the 8/17/16 and 11/16/16 Monthly Natural Resource Agency Coordination Meetings.

Loudon-Canterbury, 29613 (X-A004(201))

Christine Perron started the meeting by providing an update on the project’s schedule. The project was first reviewed at the August 2016 Natural Resource Agency Coordination Meeting, at which time a broad overview was given of the project and known resources. A Public Informational Meeting was held in Loudon on November 30, 2016, and a NHDOT Public Hearing for the first phase of the project is expected to be scheduled for later this winter or early spring. The NEPA document will be completed for the project over the next month. Design of the overall project has advanced enough at this point to calculate preliminary impacts. The purpose of this meeting is to provide a summary of proposed work and preliminary impacts to obtain input prior to finalizing NEPA and presenting the project at a Public Hearing.

The length of the project was recently reduced from 4.5 miles to 3.5 miles, with the northern limit of the project moving south by one mile. As discussed at the August meeting, the project will be constructed in two phases. Phase I of the project is approximately 1 mile in length, located just south of the NH Motor Speedway. Phase II of the project is two segments of roadway, each approximately 1.25 miles, located to the south and north of Phase I.

Trent Zanes gave an overview of the proposed design. The existing roadway consists of two 12' shoulders and two 12' travel lanes for a pavement width of 48'. The project proposes to widen the roadway to accommodate an additional 12' lane to serve as a two-way left-turn lane. The travel lanes and shoulders would remain 12'. Overall widening would be approximately 12', resulting in a pavement width of 60', with 6' of widening on each side of the road in most locations. The roadway typical will be wider along one section of NH Route 106 within the limits of Phase I between Clough Hill Road and the south entrance of the speedway, a distance of approximately 1,600 linear feet (LF). This area experiences heavy pedestrian use during race events. In order to address safety concerns associated with large numbers of pedestrians and vehicles on the road at the same time, there will be an additional 6' offset to guardrail, resulting in a grass panel between the paved shoulder and guardrail.

C. Perron provided a summary of preliminary wetland and stream impacts. At the August meeting, there was discussion about submitting separate permit applications for Phase I and Phase II while providing mitigation for the overall project. Preliminary impacts were summarized as follows:

Phase I (1 mile):

Temporary – 2,350 square feet (sf)

Permanent Wetland – 4,350 sf

Permanent Stream – 6,030 sf (290 LF)

Phase II (2.5 miles):

Temporary – 8,015 sf

Permanent Wetland – 27,700 sf

Permanent Stream – 775 sf (70 LF)

Cumulative Totals:

Temporary – 10,365 sf

Permanent Wetland – 32,050 sf

Permanent Stream – 6,805 sf (360 LF)

Impacts are the result of wider roadway fill slopes extending into wetlands, as well as from proposed culvert work. There are six stream crossings in the current project area. Gues Meadow Brook is carried under NH Route 106 at three locations, all of which are Tier 3 stream crossings. There is no work proposed at the northern Gues Meadow Brook crossing. There are also two Tier 1 stream crossings and one Tier 2 crossing in the project area. None of these crossings have a history of flooding. The larger structures are in good condition and do not require replacement. A summary of proposed work at each stream crossing was provided.

Station 5448+05 (Phase I)

This Tier 1 crossing is a 15" reinforced concrete pipe (rcp) that carries an intermittent stream. The outlet is perched approximately 2". The stream comes from the hillside west of Mudgett Hill Road and only a small length of channel extends from the culvert under Mudgett Hill Road to the culvert under NH Route 106. Proposed work entails upsizing and extending the pipe and addressing the perched outlet, resulting in approximately 20 LF of channel impact.

Station 5464+50 Rt to 5467+50 Rt (Phase I)

This location is an area where Gues Meadow Brook is parallel to the roadway and is in the section that will have the wider roadway typical with the grass panel. Proposed work will involve clearing and slope work to the edge of the stream. Impacts to the stream could be avoided by steepening the slope to nearly 1:1; however, this would require either an engineered slope (preferred), riprap, or retaining wall, none of which would support the woody vegetation that currently grows on the slope along the channel. The engineered slope would be vegetated with grass. In order to create a slope that could support woody vegetation, the edge of the stream channel would be impacted by fill, or the stream channel would need to be realigned to the east. Both options would result in more substantial impacts to the stream.

Gino Infascelli asked about the width of the stream channel at this location. Chris Carucci replied that it is 12-14' in width.

Mark Kern asked if the roadway could be widened in the other direction (west) to avoid impacting the stream. C. Carucci stated that there are other resources on the west side of the road that could not be impacted.

Matt Urban asked if this section of stream channel had been straightened in the past. C. Carucci said that it had been impacted by previous projects.

M. Kern asked if stormwater runoff would sheet flow down the slope directly into the stream. C. Carucci replied that this section of roadway would have curbing and runoff would flow into catch basins and outlet away from the stream.

The consensus of the group was that a steeper, grassy slope that avoided impacts to the channel was preferable to realigning or filling the stream channel.

Station 5472+50 (Phase I)

This is the first crossing of Gues Meadow Brook, consisting of twin 72" concrete pipes. The existing pipes are in good condition and the proposed treatment involves extending the pipes 10' upstream (30 LF of impact) and 6' downstream (20 LF of impact). A snowmobile bridge is located over the upstream end of the culverts and is used by pedestrians during race events. This crossing is located within the section of roadway that will have a wider typical with grass panels. This wider typical, with the proposed 10' culvert extension, would allow for removal of the snowmobile bridge.

At the time of the delineation in July 2016, during drought conditions, the outlet of the pipes was approximately 6" above the water surface. Lori Sommer asked how this perch would be addressed and if the slope of the culvert was known. C. Carucci said that the slope is less than 1%. He asked if it was necessary to provide a crossing that was never perched in any flow condition. M. Urban commented that the stream crossing rules state that aquatic organism passage cannot be diminished, and the proposed culverts would likely perpetuate the existing condition without making the perch any worse. G. Infascelli stated that, as a Tier 3 crossing, aquatic organism passage must be improved.

The perched outlet at this crossing will need to be further studied and discussed prior to permitting.

Station 5482+50 Lt to 5484+50 Lt (Phase I)

This location is just south of second Gues Meadow Brook crossing and is within the section that will have the wider typical with the grass panels. The stream at this location is influenced by beaver activity, which has resulted in a much wider channel, a portion of which is located along the roadway at the toe of slope. Widening at this location will result in a fill slope that extends slightly beyond Ordinary High Water along a distance of approximately 180 LF.

L. Sommer asked what would be done along the bank. C. Carucci stated that this location is similar to the slope discussed previously. A slope of 2:1 would support more vegetation. A steeper slope would reduce impacts to the stream but would only support grass. The existing slope in this location is primarily grass now.

Amy Lamb asked if the roadway width could be reduced slightly in the two locations along Gues Meadow Brook in order to minimize slope impacts. Keith Cota stated that reducing the width of the roadway would not address the safety and capacity concerns that are driving this project.

Station 5484+60 (Phase I)

This is the location of the second Gues Meadow Brook crossing noted above, consisting of twin 72" concrete pipes. The existing pipes are in good condition. The proposed treatment would entail placing a new concrete header in front of the existing MRM header and constructing new wingwalls. This would result in approximately 20 LF of impact both upstream and downstream.

L. Sommer asked if any work would be done inside the culverts. C. Carruci said that no work inside the pipes would be necessary. He further commented that these structures pass the StreamStats Q100 flows, with the water level reaching near the top of the headwall.

Station 5422+00 (Phase II)

This Tier 1 crossing is located south of Phase I. This 15" rcp carries an intermittent stream that originates in a palustrine wetland on the upstream end of the pipe. The outlet is perched about 1' above the channel due to scouring that has occurred at the outlet. Proposed work entails upsizing and extending the pipe and addressing the perch. This work would result in approximately 20 LF of impact to the stream channel.

Station 5513+70 (Phase II)

This Tier 2 crossing is located north of Phase I and consists of a 4' x 4' concrete box extended at each end with a 48" rcp. The structure carries an intermittent stream. Proposed work entails placing new concrete headwalls and extending the pipe, resulting in approximately 20 LF of impact upstream and 30 LF of impact downstream.

L. Sommer asked if all stream crossings are in Loudon. It was confirmed that they are. The Canterbury town line is located at the north end of the project.

Based on preliminary totals, cumulative permanent impacts from the overall project will be less than an acre, with approximately 360 LF of permanent stream impacts.

Mike Hicks asked if NEPA would be done for each phase or for the overall project. C. Perron replied that one NEPA document will be prepared for the overall project. M. Hicks then asked why permitting would be split up by phase. K. Cota replied that Phase I was identified as having the more critical need and Phase II is intended to supplement Phase I. Through the 10-year plan process, the legislature provided funding for Phase I ahead of Phase II. In addition, there are also right-of-way considerations. Most properties that will be impacted by Phase I are owned by the Speedway, which is expected to allow a more expedited ROW process than what is anticipated in Phase II.

M. Hicks commented that he needed to confirm with his supervisor that the two-permit approach would be acceptable. Subsequent to the meeting, M. Hicks confirmed that the Corps would be agreeable to permitting each phase separately with mitigation for overall impacts. M. Hicks further commented after the meeting that each phase of the project would likely be authorized under the PGP; however, this should be confirmed with the Corps prior to submitting applications.

L. Sommer asked about the timing of each phase. K. Cota replied that Phase I is scheduled to advertise in February 2018 and Phase II is expected to advertise in January 2020.

M. Kern asked for more information on the timing of mitigation and if mitigation would be provided in the form of an in-lieu fee. C. Perron noted that those are both questions that NHDOT wanted input on. L. Sommer commented that she would like to see mitigation via the stream crossing improvements to deficient structures in the vicinity of the project. This would entail calculating an in-lieu fee for the overall project and applying that amount of funding toward a deficient crossing in the area. If an appropriate crossing cannot be identified in the existing database, then one could be identified and reviewed this summer.

M. Hicks asked if a hydraulic analysis would be completed. C. Carucci stated that a hydraulic analysis was completed for each stream crossing.

C. Perron summarized additional resources that have been reviewed. A No Historic Properties Affected determination is anticipated under Section 106. There will be no floodplain impacts.

There are records of state listed wildlife species in the area. Impacts to these species are not anticipated since existing conditions at stream crossings will either be perpetuated or improved upon. C. Perron said that she would follow up with NH Fish & Game to confirm this.

Potential federally-listed species in the project area consist of the northern long-eared bat and small whorled pogonia. An acoustic survey was completed last summer and no northern long-eared bat calls were recorded. One stem of small whorled pogonia was identified in 2012 but could not be found in 2016. The proposed clearing and slope work will not impact the area where this plant had been identified. C. Perron said that she is currently reviewing the limits of impacts throughout the rest of the project to determine if there will be impacts to potentially suitable habitat for this species. She would follow up with Amy Lamb and Maria Tur.

There is conservation land adjacent to the project. One parcel, on which NH Fish & Game holds a conservation easement, will be impacted by proposed slope work. This parcel is located on the east

side of NH Route 106 just south of Mudgett Hill Road. A meeting will be scheduled with Richard Cook from NHFG to discuss the proposed impacts and how to move forward.

Stormwater treatment is still being designed. The project will result in approximately 193,000 square feet of new pavement. Treatment areas will be provided in multiple locations, most of which are located within wellhead protection areas. This may require impervious lining of the treatment areas or other measures to eliminate or minimize infiltration. One roadside soil filter/infiltration practice is proposed along the east side of NH 106, approximately 1,250' long, as well as one grass treatment swale. There are 5 potential stormwater treatment pond sites, two of which are on State-owned property. All locations have been reviewed for wetlands and other resource concerns. Ponds would range in size from 0.4 to 1.0 acre. Based on a preliminary analysis, it may not be possible to treat runoff from twice the area of new pavement, the general rule of thumb that is typically used for treatment. At this time, it appears that the area of treated pavement may be approximately 50,000 sf short of the goal. Proposed treatment will be reviewed at a future meeting as design progresses.

M. Hicks asked when the permit application would be submitted. C. Perron said that, based on the advertising date of February 2018, the permit application could be expected this summer.

L. Sommer commented that further discussion of mitigation would be necessary as the project moves forward.

This project has been previously discussed at the 8/17/16 Monthly Natural Resource Agency Coordination Meeting.

Cutts Cove Mitigation Discussion

No minutes provided as of 2/22/17

This project has been previously discussed with the project Portsmouth-Kittery 15371 at the 6/19/2013, 9/18/2013, 1/15/2014, and 3/19/14 Monthly Natural Resource Agency Coordination Meetings.